Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

Lectures on the Method of Science. Edited by T. B. STRONG. Oxford: The Clarendon Press. 1906. Pp. viii + 249.

A course of lectures on scientific method was delivered at Oxford during the Summer Meeting of 1905 at the request of the Delegates for the Extension of University Teaching. Nine of the lectures have been brought together in the present volume under the editorship of Dr. Strong, Dean of Christ Church, who contributes himself the closing lecture on 'Scientific Method as Applied to History' and also a preface explaining the general aim of the course—which was to illustrate the 'forms taken by scientific method in various departments of research.' The remaining lectures are as follows: 'Scientific Method as a Mental Operation,' Thomas Case, M.A., President of Corpus Christi College and Waynflete Professor of Moral and Metaphysical Philosophy at Oxford; 'On some Aspects of the Scientific Method,' Francis Gotch, D.Sc., F.R.S., Waynflete Professor of Physiology at Oxford; 'Physiology; its Scope and Method,' C. S. Sherrington, D.Sc., LL.D., F.R.S., etc., Professor of Physiology, University of Liverpool; 'Inheritance in Animals and Plants,' W. F. R. Weldon, D.Sc., F.R.S., Linacre Professor of Comparative Anatomy at Oxford; 'Psychophysical Method,' W. McDougall, M.A., Wilde Reader in Mental philosophy at Oxford; 'The Evolution of Double Stars,' A. H. Fison, D.Sc.; 'Anthropology: The Evolution of Currency and Coinage,' Sir Richard C. Temple, Bart., G.C.S.I., D.C.L.; 'Archeological Evidence,' W. M. Flinders Petrie, D.C.L., F.R.S., Professor of Egyptology, University College, London.

This array of titles and lectures is sufficient to provoke admiration and interest at the outset and to pitch the reader's expectations rather high. Dr. Strong's preface, although written with noticeable caution, adds to one's anticipations. For we have in this Oxford course an attempt to meet a demand felt by educators and investigators alike to bring a little more unity into the too detached departments of human knowledge. It is socially and educationally significant that this attempt should have been made at an Oxford Summer Meeting under the auspices of the university extension movement, because the circumstances indicate —at least in the minds of those who planned the course—that interest in the unification of knowledge is quite general, and not the exclusive possession of students of logic. It is philosophically significant that the unification should have been attempted through a discussion of scientific method concretely illustrated from various departments of research because it suggests that science is essentially not a body of knowledge, but a method of investigation and an instrument by which nature may be measurably controlled. Skilled in the use of this method and instrument, one might face the varieties of knowledge with composure and, possibly, with confidence. One's conquests would tend to promote at least an administrative unity.

The present volume, however, depends too much upon its title and its preface. Uninspired by their suggestions, the reader would not suspect that he was following a course on scientific method. He would rather suppose that he was receiving an amount of very interesting and very miscellaneous information. Professor Case's lecture is a brief treatise on inference by analogy, by induction and by deduction, and departs very little from traditional logic. Such a treatment has become too obviously formal to throw much light on scientific method as a mental operation. Perhaps little light can be thrown upon it as such in any event, for scientific method appears to be not so much the mental operations involved in the making of inferences as a handling of material in a way to make inferences easy and obvious. If the title of Professor Gotch's lecture had been 'On some Aspects of the Scientific Temper,' it would have more accurately described the contents. They deal little with method, but much and interestingly with the temperamental characteristics of scientific men as these are revealed by the opposition science has encountered in its progress. The reader may be led to appreciate that for which science stands, but he will not be much wiser in its methods. Under the caption 'Physiology; its Scope and Method,' Professor Sherrington writes most entertainingly on the heat of the body, but in spite of ingenious suggestions and occasional reminders he can hardly expect the reader to believe that he is thereby illustrating the method and scope of physiology. One attending the Summer Meeting would have been unwise, however, if he had avoided the lecture on that account.

Professor Weldon's contribution invites the same criticism of sailing under false colors, but with a kind of perversity illustrates scientific method better perhaps than any other lecture in the volume. Inheritance in plants and animals is his announced theme. He says, however, practically nothing about it. Instead he expounds the method of statistics as illustrated in measuring the latitude of the Radcliffe Observatory, in determining the weight of oxygen and nitrogen, and in the throwing of dice. A single paragraph toward the close of the lecture states Pearson's result from applying the same method to determine the regression between parent and child as illustrated by the relation between breadth of span in mothers and in daughters. But we have a genuine discussion of scientific method concretely illustrated. It is doubtful whether the discussion does much to clarify the method, but it produces the conviction that the scientist has at his command the means of bringing extremely variable phenomena within the domain of measurement.

Perhaps it was the feeling that the term 'psychophysical method' is a misnomer that led Professor McDougall to devote his lecture to a consideration of psychophysical science in general, its relation to its allied sciences and to an illustration of the way the psychologist has met the difficulties encountered in determining the action-time of light. This illustration, which is worked out with admirable brevity and clearness, together with an equally excellent exposition of Fechner's conception of the requirements of psychophysical science, can not fail to give the reader a lively appreciation of the complexity of the problems with which the experimental psychologist has to deal and of the means he has employed. A region of investigation is thereby determined, but not a peculiar method which should bear the name 'psychophysical.' The methods employed are common to all workers in science. The problem only is distinctive.

Yet the lecture admirably illustrates the way the scientist by the use of experiments can disentangle factors which appear to be inextricably interwoven. It exhibits the method of experimental analysis in operation. Although the method receives no general formulation, it was doubtless worth while to behold it concretely at work in one of the more recent departments of research.

A result similar to Professor McDougall's has been achieved by Dr. Fison in his lecture on the evolution of double stars. It is a highly interesting and instructive lecture. Indeed the part played by the investigation of double stars in forming our general conception of stellar evolution is so admirably told that the problem of method is obscured by the beauty of the result. Yet the lecture merits study because of the richness with which it illustrates the method of employing the mechanics of fluids in the interpretation of celestial phenomena. Perhaps no department of science can offer more striking instances than that from which Dr. Fison has drawn of the transition from experiment to generalization in a new region and back again to experiment. Here we find at once the familiar and the powerful procedure of science. The familiar operations of ordinary things once formulated in mechanical terms become themselves instruments for analysis as powerful as the more material tools and devices to be found in any laboratory.

In Sir Richard Temple's lecture on the evolution of currency and coinage as an illustration from the science of anthropology, the question of method is once more lost—and this time entirely—in subject-matter. To be sure, we are told that the evolution exhibits the 'constant nature of human reasoning' and the 'law of contact' which is 'the fundamental law to be observed in all anthropological research.' The bearing of these considerations on scientific method is not obvious.

Professor Petrie in discussing the types of evidence with which the archeologist deals approaches once more the general theme of the course. For evidence is a device to make inferences easy and obvious. The four types of evidence noted—witnesses, material facts, exhaustion, probability—are illustrated in the realm of law and parallels drawn in the realm of archeology. Certain factors which tend to corrupt evidence are noted, but there is little suggestion of a genuine methodology.

Dr. Strong in the closing lecture considers, first, the 'form of the historical statement and the historical question,' and, secondly, 'our mental attitudes towards historical statements.' The reader has once more his general question put to this particular case: How do such considerations illustrate the scientific method as applied to history? There is some examination of the general problem of evidence, and Dr. Strong distinctly opened the way for a discussion of general methods in specific application by distinguishing historical facts from those of physical science. The former belong to the class of facts which are unique and occur once, the latter to the class that are general and can be repeated. The historian's problem, according to Dr. Strong, is thus so to reconstruct the setting of the unique fact he is studying that this fact will appear rigidly placed. How this can best be done was worth more detailed consideration than is here given to it, or might have been illustrated by concrete examples. Criticism of Dr. Strong should, however, accept his own view of the peculiar difficulties of his task: "This task appears to me difficult because, while much is said nowadays of the importance of a scientific conception of history, I do not think there is anything like the same agreement about the character of scientific history as exists in the case of most other sciences."

"The course as delivered in Oxford was received with great satisfaction." So we are told. There can be little doubt of it. One can readily believe that the audience remained in generous attendance to the end. But it is hard to believe that they were much enlightened on the method of science.

FREDERICK J. E. WOODBRIDGE.

COLUMBIA UNIVERSITY.

Essay on the Creative Imagination. TH. RIBOT. Translated from the French by ALBERT H. N. BARON, Fellow in Clark University. Chicago: The Open Court Publishing Co.; London: Kegan Paul, Trench, Trübner & Co. 1906. Pp. xix + 370.

Mr. Baron has done us a service of some value in rendering into English M. Ribot's monograph on the creative imagination. The translation sticks somewhat closely to the original idiom, but this is a virtue rather than a fault. The book is neatly gotten up, well printed, with a good index. It forms a valuable addition to the psychological literature on imagination, and it is to be hoped that some of the other French monographs on kindred topics will receive a similarly respectable English dress. It is strange that some of the recent French monographs on attention, will, etc., should have been prepared in English, and then been done into French. This, however, is by the way.

I shall by no means attempt to give an adequate account of the contents of the book. As it has been translated into English, it is accessible to any one choosing to look up the subject further. In the following remarks I shall try rather to call attention to the striking features which are in evidence.

As the title indicates, the subject is restricted to 'Creative Imagination.' No discussion in full of memory or association is to be expected. But imagination as it is usually understood is treated in full. As M. Ribot insists, creative imagination is something more than reproductive imagination, or memory. "In imaginative creation we have several cooperating images, with combinations, coordination, arrangement, grouping" (p. 8). After having defined the subject, M. Ribot proceeds to discuss imagination under the following heads: Analysis of the Imagination, Development of the Imagination, Types of Imagination, Conclusion and Appendices.

Analysis.—As regards its intellectual aspects, imagination presupposes a negative operation, dissociation, and a positive operation, association. In the process of dissolution images may become incomplete, schematic, or they may remain more or less complete. In the association of such